

# EUROPEAN PATENT OFFICE

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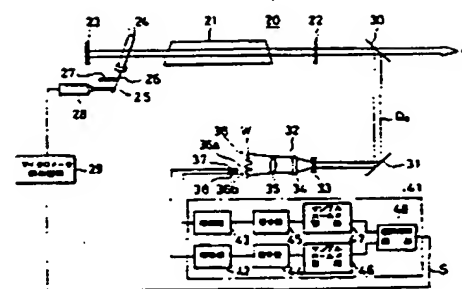
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APPLICANT : TOSHIBA CORP;

INVENTOR : SAKUMA JUN;

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TITLE : NARROW BAND LASER DEVICE



**ABSTRACT :** PURPOSE: To eliminate the variation in a central wavelength and to stably narrow a band by detecting a regulating direction for correcting to a position for obtaining a desired central wavelength of a band narrowing element from the difference of light intensities detected by photodetectors disposed at least at two positions where interference fringes are presented, and altering the disposing state of the element in response to the regulating direction.

**CONSTITUTION:** When the central wavelength of a laser light Q is varied, the peak position of an interference fringes W is moved. When the central wavelength of the light Q is varied to a long wavelength side, the fringes W is moved downward. Thus, a light intensity detected by a photodetector 37 becomes a lower light intensity e2 than e1, and the light intensity detected by a photodetector 38 becomes higher light intensity e3 than e1. A differential amplifier 48 sends a disposition regulating signal (s) of a level responsive to the light intensity difference of the intensities e2, e3 in a negative direction to a micrometer driving circuit 29. When this circuit 29 receives the signal (s), it sends a drive control signal to a motor driven micrometer 28 to vary the inclining angle of an etalon 24. As a result, the central wavelength of the light Q becomes a desired wavelength.

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